

CLAIMS

1. Gas supply arrangement (1) of a marine vessel (6) being adapted to carry liquefied gas in its gas tank (4) having an ullage space section (4.1) and a liquid phase section (4.2), which arrangement provides the gas for demands of the vessel, the arrangement comprising:
 - a gas supply line (2) provided for delivering the gas formed in the gas tank to a consumption device (5),
 - a piping (3.1) extending from the liquid phase section (4.2) to the ullage space section (4.1) of the gas tank (4) being provided with at least a pump (3.1), for introducing gas into the ullage space section, **characterised** in that the piping is provided with a heat transfer unit (3.6) for effecting on the temperature of the introduced gas.
2. Gas supply arrangement (1) of a marine vessel (6) according to claim 1, **characterised** in that the arrangement is provided with a first sensor (3.3) adapted for measuring the pressure in the ullage space section (4.1) of the gas tank (4), and that the piping is provided with a control valve (3.5), and that the first sensor (3.3) is arranged in control communication with the control valve (3.5).
3. Gas supply arrangement (1) of a marine vessel (6) according to claim 1, **characterised** in that the heat transfer unit (3.6) comprises a heat exchanger (3.7) arranged in the piping, and that the piping is provided with a bypass conduit (3.10) passing by the heat exchanger (3.7) and with a three-way valve (3.9) for control the gas flow between the heat exchanger and the bypass conduit (3.10).
4. Gas supply arrangement (1) of a marine vessel (6) according to claim 3, **characterised** in that the arrangement is provided with a second sensor (3.11) adapted for measuring the temperature in the ullage space section (4.1) of the gas tank (4), and that the second sensor (3.11) is arranged in control communication with the three-way valve (3.5).

5. Method of providing gas in a marine vessel (6) with liquefied gas tank (4) having an ullage space section (4.1) and liquid phase section (4.2), and a gas consumption device (5), in which arrangement gas is evaporated in the gas tank (4) and led to the consumption device (5) via a gas supply line (2) while the pressure

5 in the gas tank (4) is substantially continuously measured by a first sensor (3.3), **characterised** in that the evaporation rate of the gas in the gas tank (4) is controlled, by controllably spraying liquefied gas into the ullage space section and that the flow rate of sprayed liquefied gas is controlled based on the pressure measurement of the first sensor (3.3).

10 6. Method of providing gas in a marine vessel (6) according to claim 5, **characterised** in that the evaporation rate of the gas is controlled by controlling the temperature of the sprayed gas.

7. Method of providing gas in a marine vessel (6) according to claim 6, **characterised** in that the temperature of the sprayed gas (3.4) is controlled based on temperature value measured by a second sensor (3.11) provided in connection with the gas tank (4) ullage space section (4.1).